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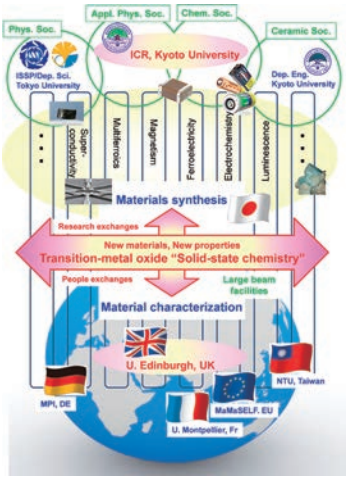
ICR News 2017

JSPS Core-to-Core Program Advanced Research Networks A. (2016-2021) Solid-State Chemistry for Transition-Metal Oxides: Exploring for New Materials with Novel Functionalities

■ Prof SHIMAKAWA, Yuichi

The discovery of new materials with outstanding properties motivates much of modern chemistry, physics and materials science. New materials with novel functionalities are also strongly demanded for developing future information and energy technologies. The general aim of this collaboration project is to discover new oxides having interesting and useful properties. Strong collaboration of materials synthesis teams and structure and property characterization teams will lead to development of advanced solid-state chemistry.

The consortium consists of materials chemists and physicists in Japan, UK, France, and Taiwan with common interests in materials science and solid-state chemistry and physics. The collaboration scheme encourages exchanges of scientific knowledge and people including young researchers and students. The program will also give many opportunities for young researchers in experiencing materials science research from synthesis to characterizations in large variety ways.



Institute for Chemical Research International Symposium of NMR 2017: DNP-NMR Workshop

■ Prof KAJI, Hironori

Nuclear magnetic resonance (NMR) is ever-growing, and developments of NMR based on novel concepts have been still ongoing. Among them, tremendous efforts have been made from various perspectives to solve the inherent NMR low sensitivity. Dynamic nuclear polarization-enhanced NMR (DNP-NMR) is one of the most successful technique for sensitivity enhancement, and thus commercially-available DNP-NMR systems have been introduced in Europe and the United States. Under such circumstances, we installed a DNP-NMR system at ICR, Kyoto University this year, which is the first commercial DNP-NMR product not only in Japan but also in Asia. On the occasion, we had an opportunity to hold the DNP-NMR workshop as an ICR International Symposium, "ICRIS-NMR '17: DNP-NMR Workshop". We had ten world-famous researchers as invited speakers and 131 attendees from all over the world in this workshop, showing the increasing interest for DNP-NMR as a novel analytical technique. We expect further developments of NMR and DNP-NMR community in near future.

This workshop was financially supported by Kyoto Convention Bereau (MICE support) and several companies. Travel and accommodation expenses were supported by JSPS KAKENHI (A) (No. 17H01231). We also acknowledge Kyoto University program (SPIRITS) and the Collaborative Research Program of ICR, Kyoto University (grant # 2015-90) for the introduction of DNP-NMR.

■ http://moma.kuicr.kyoto-u.ac.jp/icris2017/index-e.html

Materials Related with "Origin of Polyethylene Industry by the High-pressure Process in Japan" in the Institute for Chemical Research Were Added to the Registry of Essential Historical Materials for Science and Technology

■ Prof MURATA, Yasujiro

Engineering drawings, notebooks, and reports, industrial process of actual production of polyethylene in Japan conducted in Kyoto University, were added to the Registry of Essential Historical Materials for Science and Technology by the Center of the History of Japanese Industrial Technology, the National Museum of Nature and Science, Japan. These materials had been already certified last year as the Chemical Heritage by the Chemical Society of Japan.

The Registry includes one of the most important historical materials related to technology for the benefit of society in the future. The presentation ceremony of the Registry was held at the National Museum of Nature and Science, Tokyo, Japan on 12th September 2017. On behalf of the director of ICR, Prof. Murata, who succeeded the materials from the previous professors, attended the ceremony and received the certificate.

Renovation of the "Red Brick House" and Fresh Start as "Hekisui-sha"

■ Prof TSUJII, Yoshinobu

On the occasion of the 90th anniversary of the Institute for Chemical Research (ICR), the Ceramic Chemical Experiments Workshop "Red Brick House", which had played an important role in Uji campus for a long time, was renovated and restarted freshly as "Hekisui-sha". The building is installed not only with a multipurpose meeting space but also an exhibition space for the long history and splendid achievements of ICR. It will be effectively used as a common-use auditorium with unique and original atmosphere, contributing to research exchange among the faculties, researchers and students of ICR covering diverse fields.

Request for Cooperation to the ICR's 100th Anniversary Fund

ICR has established a fund called "The ICR's 100th Anniversary Fund," which is a part of the Kyoto University Fund. Its aims are to hold the 100th anniversary event in 2026, to enhance the educational and research environments at ICR, and to promote social contribution activities. We ask for your kind understanding and cooperation.

■ http://www.kikin.kyoto-u.ac.jp/contribution/chemical/